REMARKS

Claims 52-93 remain in this application. Claims 52, 54, 62-63, 65-67, 69-71, 82-83, 86, 88, 90, and 92-93 have been amended. Claims 1-51 were previously cancelled. The Applicants respectfully request reconsideration and review of the application in view of the amendments and the followings remarks.

As an initial matter, the Applicants would like to express their gratitude toward the Examiner for taking the time to discuss the present application by telephone on May 25, 2004, prior to this submission.

Before addressing the merits of the rejections based on prior art, a brief description of the present application is provided. The present invention is directed to a system and method for remotely providing a device driver over a network to a peripheral device in a highly available manner (i.e., a failover or redundant manner). Computers in a network can be categorized as two types: servers and clients. A client can be further understood to be a thin client (in contrast with a thick client or a full-featured workstation). A thin client or a desktop unit (DTU) is a small "plug and work" desktop computer whose main function is to process all input and output for the user and to manage communication with at least one server. All other client processing for the user is concentrated on a group of servers and shared amongst a community of DTUs. The removal of the traditional client processing (e.g., driver service) from the DTU (or thin client) into the shared servers permits simplification of the DTU in the network because software and hardware for performing these tasks are not needed at the DTU. Traditionally, for example, when a peripheral device (e.g., a keyboard, a printer, a scanner, etc.) is made available on a DTU, a new device driver needs to be deployed into the DTU to control and use the new device. By contrast, the present invention provides a system and method in which, when a peripheral device is made available on the DTU, there is no need to deploy a new device driver into the DTU.

Specifically, the present invention provides a device manager on a server to interface (or broker) a device service (e.g., a scanner service or a scanner driver) on the

server with a peripheral device (e.g., a scanner) on a desktop unit to control and use the peripheral device. To make the control and use of the peripheral device highly available, the present invention also provides a plurality of device managers located in a plurality of servers. For example, a request for a control of the peripheral device can be presented first to a first device manager in a first server. The device service can also be located in the first server. In the event of a failure of the first device manager or an inability of the first device manager to interface the device service with the proper peripheral device, the control request is transferred to a second device manager in a second server. The second device manager then allocates the proper peripheral device to be controlled by the requesting device service. Thus, the present invention provides a plurality of device managers for interfacing (or brokering) device services on the servers with peripheral devices on the DTUs in a grouped server environment that are highly available and self-organizing with no single point of failure.

The Applicants have amended Claims 52, 54, 62-63, 65-67, 69-71, 82-83, 86, 88, 90, and 92-93 to clarify certain features of the subject matter being claimed and/or for consistency purposes.

Claims 52-93 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Lumelsky (U.S. Patent No. 6,460,082). The Applicants respectfully traverse these rejections.

Lumelsky is directed only to management of media resources (services) provided over the Internet, such as Internet TV. The "manager" in Lumelsky is disclosed as used only for managing server hardware devices. See Col. 16, lines 45-66. That is, in Lumelsky the "manager" only manages the server devices by grouping the necessary server devices that provide media resources to a monitor. By contrast, in the invention, the device manager manages the "devices located on the desktop unit" by interfacing (or brokering) these devices with the device services on the server. See Claims 52, 82, and 93.

To put it another way, a patentable difference between the present invention and

Lumelsky is that the device manager in the present invention is a gate-keeping or interfacing manager for brokering a proper device (or peripheral device) located on a desktop unit (DTU) with a proper device service running on a server. On the other hand, the "manager" in Lumelsky is a gathering manager for grouping server devices (i.e., hardware devices) to provide media resources in order to ensure a certain Quality of Service (QoS) to the media displayed on a monitor. Thus, the present invention's device manager, which allocates a device to a device **service** is functionally and structurally different from the hardware groping "manager" for grouping server hardware devices in Lumelsky. Accordingly, any alleged similarities between the device manager of the present invention, and the grouping manager in Lumelsky are immaterial and Lumelsky does not disclose or teach all features of the present invention's device manager. See Scripps Clinic & Research Found. v. Genentech, Inc., 927 F.2d 1573, 1576 (Fed. Cir. 1991) ("There must be **no** difference between the claimed invention and the reference disclosed, as viewed by a person of ordinary skill in the filed of the invention.")

Specifically, with regard to amended independent Claim 52, the Applicants respectfully submit that Lumelsky fails to disclose or suggest a method for device management in a grouped server system, comprising:

creating a request to **control a device on a desktop unit from a device service on at least one of a first server and a second server;**

transferring said request from a first device manager in said first server to a second device manager in said second server, said first device manager being coupled to said device service;

allocating said device to said device service via said second device manager; and

informing said first device manager of said allocation via said second device manager;

> **wherein said device service controls said device by implementing a complete device driver for said device.**

(Emphasis in bold added).

Amended independent Claim 82 should also be allowable because Lumelsky does not disclose or suggest a grouped server system, comprising:

> an interconnect;
>
> a plurality of servers, **each of said servers having a device manager;**
>
> a plurality of device **services for implementing device drivers located on said servers;**
>
> a plurality of desktop units coupled to said servers via said interconnect, each desktop unit being coupled to one of said device managers; and
>
> a plurality of peripheral devices located on said desktop units;
>
> wherein **said device managers** on said servers **broker controls of said peripheral devices on said desktop units by said device services on said servers**; and
>
> wherein **said device managers are operating in a group.**

(Emphasis in bold added).

In addition, with regard to amended independent Claim 93, the Applicants respectfully submit that Lumelsky fails to disclose or suggest a computer readable medium for implementing an instruction set for maintaining a persistent connection between **a device located on a desktop unit** and a single device manager **for interfacing a device service with the device**, the computer readable medium comprising:

> a first instruction set for establishing a first communication path between said desktop unit and a first device manager; and

a second instruction set for establishing a second communication path **between said desktop unit and a second device manager when an event occurs;**

wherein said device comprises one of a keyboard, a mouse, a speaker, a scanner, and a microphone;

wherein said event comprises failure of said first device manager;

wherein said first device manager and said second device manager operate in a group;

wherein said device service implements a driver to control said device and is located in a first server; and

wherein said second device manager is located in a second server and said first device manager is located in said first server.

(Emphasis in bold added).

Therefore, because Lumelsky fails to disclose or suggest the above limitations of independent Claims 52, 82, and 93, the rejections of these claims, as well as Claims 53-81, and 83-92, which depend from Claims 52 and 82, respectively, should be withdrawn.

In addition, dependent Claims 54, 62-63, 65-67, 69-71, 86, 88, 90, and 92 have been amended to further clarify the claims (e.g., to further clarify that the present invention is not directed to a hardware gathering manager for grouping hardware server devices and/or to further clarify the present invention's high availability or failover mechanism). The limitations in these amended dependent claims are not disclosed or suggested in Lumelsky. For example, the time stamping mechanism (in, e.g., Claims 70, 71, and 86) for time stamping messages to guarantee that no device information stored in the device manager is outdated is independently patentable. That is, Lumelsky only discloses an envelope that may be time variant. Lumelsky's time variant envelope is defined as only a grouping rule (or profile) used only for indicating hardware
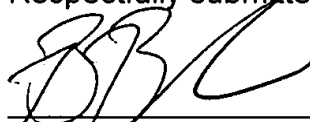
resource requirements for providing media to a monitor to ensure a Quality of Service (QoS). See Col. 5, lines 14-23. There is no disclosure or suggestion in Lumelsky that this variation in time of the requirements for providing a media service (or the time variant envelope) is actually time stamped or that the time stamp can be used to determine which device information in the device manager is outdated (as is defined by claims of the present invention).

In view of the foregoing, the Applicants respectfully submit that Claims 52-93 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. If it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent necessary, the Applicants petition the Commissioner for a one-month extension of time, extending to June 21, 2004, the period for response to the Office Action dated February 19, 2004. A check in the amount of $880.00 is enclosed for the one-month extension of time ($110.00) pursuant to 37 CFR §1.17(a)(1) and for request for continued examination (RCE) ($770.00) pursuant to 37 CFR §1.17(e). The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,

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